Response ID:444 Data

1. BOSC 2017 Nominations

Self Nomination:

Yes

Nominator Information

First Name

Last Name

Nominator Title

Street Address

City

State

Postal Code

Email Address

Phone Number

Mobile Phone

Nominee Information

First Name

Jeffrey

Last Name

Arnold

Nominee Title

Senior Scientist

Street Address

Exemption 6

[redacted]

Mobile Phone

Employment Information

Place of Employment/Work:

United States Army Corps of Engineers | University of Washington Joint Institute for the Study of the Atmosphere and Ocean

Work Street Address

USACE UW JISAO | 3737 Brooklyn Ave NE | 144 JM Wallace Hall

Work City

Seattle

Work State:

WA

Work Postal Code

98105-6715

Work Phone Number

206-543-0917

Work Email Address

jeffrey.r.arnold@usace.army.mil

Sector

Federal Government

Qualifications

Primary Area(s) of Expertise

Atmospheric Chemistry and Physics
Land-surface Science and Watershed-scale Hydrology
Uncertainty Characterization and Visualization for Decision-making Applications of Science

Committee Preference(s)

Executive Committee
Air, Climate, and Energy Subcommittee

Statement of Interest

My interest in returning to serve on the BOSC (member of BOSC ACE 2014-17) derives from my experience in academic and U.S. Federal government labs creating and using observational data and numerical model outputs to explain, predict, and understand the complex interactions at the atmosphere-hydrosphere interface, and in using that understanding to improve decision-making concerning the environment and human-environmental interactions. Doing that work has strengthened my belief that the highest quality of review of U.S. Federal environmental science is imperative for ensuring that the best science is used to formulate appropriate questions and help provide answers to specific, important questions about human health and the environment.

Skills/qualifications related to committee preference(s) specified

> Previous service on BOSC ACE Subcommittee, 2014-17.
> 30y experience making and using observations and numerical models to explain aspects of fundamental atmospheric and land-surface science, and using fundamental science for specific environmental applications.
> Wide experience of the U.S. Federal government science enterprise across EPA, NOAA, DOD, DOE, NSF, NASA, and DOI.
> Co-authored more than 50 papers in high-impact atmospheric and hydrologic science journals.
> Serves on program and proposal review committees for NASA, NOAA, DOE, and NSF.
> Member, U.S. DOE, Office of Science, Committee of Visitors to evaluate the efficacy and quality of the science portfolio and administrative processes of the Department's Climate and Environmental Science Division.
> Member, Board of Directors, University Corporation for Atmospheric Research COMET Science Training Program.
> Ph.D., Atmospheric Chemistry and Physics, and Environmental Risk Analysis | University of North Carolina at Chapel Hill.

Other Relevant Information

CV/Resume URL

2. CV/Resume

Please upload your CV/ Resume.

2017.06.21.arnold.epa.bosc.resume.pdf

3.

BOSC Nomination

Jun 21, 2017 19:44:45 Success: Email Sent to: tracy.tom@epa.gov

4. Thank You for your Submission!

JEFFREY R. ARNOLD, PH.D.

Exemption 6 [redacted]

A high-performing, results-oriented, and award-winning Senior Scientist and National Program Co-Director with more than 25 years of experience working on high-profile problems in atmospheric and land-surface science coupled to energy-generation science and policy; science-based policy development and execution; and collaborative design and management of model- and data-intensive environmental projects and programs.

CORE COMPETENCIES

Atmospheric and Land-surface Science | Changing Energy Production under Changed Futures National Program Development and Management | Strategic Planning and Leadership | Consensus Building

PRESENT POSITION

10/2009 to Present. **Senior Scientist** | U.S. Army Corps of Engineers (USACE) | 144 JM Wallace Hall, 3737 Brooklyn Ave NE | University of Washington |Seattle, WA

LEADERSHIP AND MANAGEMENT: Provides U.S. federal career and political leaders the direction, execution, evaluation, and management of atmospheric and land-surface science components for all USACE national programs. Designs, implements, and evaluates innovative policies for USACE to continue meeting its operational requirements under current and projected future change conditions. *Serves as Senior Advisor to USACE Chief of Engineers and to USACE Civil Works Director for atmospheric science and policy issues. Represents USACE senior leaders internally and externally on atmospheric science issues; and regularly briefs U.S. Army Assistant Secretary for Civil Works (civilian), USACE Commanding General (military), and other Department of Defence (DoD) senior career and political appointees*.

LEADING PEOPLE: Co-directs USACE day-to-day program operations and administrative jurisdictional execution. Designed, implemented, and manages novel data collection and analysis networks. Leads 10 or more teams, each having up to 20 scientists, engineers, and policy experts to execute program work. Plans and initiates staff development, manages deployments and project workloads, and performs individual and team evaluations and performance recommendations.

RESOURCES MANAGEMENT: As National Program Co-Director, initiates, formulates, justifies, executes, evaluates, and documents the program annual budget for national and international work. Ensures that planning, budgeting, intra- and extramural resource management and accountability conform to regulations.

PROGRAM PLANNING AND ORGANIZATION: Sets USACE national program goals and timelines; and initiates and directs staff work for development, execution, and evaluation of new or modified policies from U.S. federal coordination offices including Office of Management and Budget (OMB). Initiates, directs, evaluates, and reports on coordination and strategic integration of national programs into overall USACE operations.

BUILDING COALITIONS: Initiates and directs strategic actions to coordinate USACE national progams with internal and external organizations. *Identified needs, initiated agreements, and manages multiple, new-to-USACE formal collaborations and partnerships with nine federal and non-federal entities for supporting cross-agency science research and applications for policy development and implementation*. Represents USACE on mulitple cross-agency committees of the White House Office of Science and Technology Policy (OSTP).

Selected Accomplishments

- Initiated, secured and defended funding for, and executing 12 new, multimillion-dollar commitments joining multiple agencies and universities to implement work in public-private programs around the world.

- *Initiated and co-leading unique partnership teams with the Department of Interior's Bureau of Reclamation to develop, deliver, and formally evaluate an innovative series of professional science and engineering training courses – more than 200 individuals have completed courses to date.*
- Awarded 2-Star (Major General) Deputy Commanding General Commendation for service to USACE on multiple White House science-based policy initiatives (2013).
- *Awarded 3-Star (Lieutenant General) Commanding General and Chief of Engineers Commendation for developing multi-agency framework for coordinated science-policy reviews (2012).*
- Awarded 2-Star (Major General) USACE South Atlantic Division Commanding General Commendation for exceptional service to Division executives and local stakeholders (2011).
- *Led teams for and co-wrote five science-based U.S. federal policies.*
- *Co-wrote 27 peer-reviewed publications in high-impact journals.*

EDUCATION

> Ph.D., Tropospheric Chemistry and Physics | University of North Carolina at Chapel Hill.

PEER-REVIEWED PUBLICATIONS IN HIGH-IMPACT JOURNALS *[SELECTED FROM A TOTAL OF 58]*

> Clark, MP, et al. "Improving the theoretical underpinnings of process-based hydrologic models." *Water Resources Research*, doi: 10.1002/2015WR017910 (2016).

> Gutmann, ED *et al*. The Intermediate Complexity Atmospheric Research Model (ICAR). *Journal of Hydrometeorology*, doi: 10.1175/JHM-D-15-0155.1. (2016).

> Clark, MP *et al*. Characterizing the uncertainty of hydrologic impacts of climate change. *Current Climate Change Reports*, doi: 10.1007/s40641-016-0034-x. (2016).

> Newman, AJ *et al*. Development of a large-sample, watershed-scale hydrometeorological dataset for the contiguous USA: Dataset characteristics and assessment of regional variability in hydrological model performance. *Hydrology and Earth System Sciences*, doi: 10.5194/hess-19-209-2015. (2015).

> Clark, MP, et al. "A unified approach to process-based hydrologic modeling: 1. Modeling concept." *Water Resources Research*, doi: 10.1002/2015WR017198 (2015).

> Mizukami, N, et al. "Implications of the methodological choices for hydrologic portrayals of climate change over the contiguous US: Statistically downscaled forcing data and hydrologic models." *Journal of Hydrometeorology*, doi: 10.1175/JHM-D-14-0187.1 (2015).

> Douglas, TA *et al*. Sources and sinks of carbon in boreal ecosystems of interior Alaska: A review. *Elementa: Science of the Anthropocene*, doi: 10.12952/elementa.000032. (2014).

> Moss, RH *et al*. Hell and high water: Practice-relevant adaptation science. *Science*, doi: 10.1126/SCIENCE.1239569. (2013).

RELEVANT PREVIOUS EMPLOYMENT

7/2007 to 10/2009. **Senior Scientist and Lead Atmospheric Scientist** | U.S. Environmental Protection Agency (USEPA), Office of Research and Development, National Center for Environmental Assessment (ORD NCEA) | Research Triangle Park, NC.

8/2000 to 7/2007. **Project Scientist** | National Oceanic and Atmospheric Administration, Atmospheric Sciences Modeling Division (NOAA ASMD), and USEPA National Exposure Research Laboratory (NERL) | Seattle, WA.